

WaferMark[®] CSP200

Wafer Level Die Marking System



Quality die marking for traceability, product identification and orientation.

- High throughput, producing the industry's highest quality marks
- Processes background, polished, coated, oxidized, and other surface types
- Fully automated wafer cassette mapping, wafer transport, alignment, and calibration
- LightWriter[®] software with product setup and training wizard
- Integrated mark inspection and validation
- Accurately marks die as small as 0.5mm in size



Introducing the WaferMark® CSP200

The *WaferMark CSP200* from *GSI Group* helps you make the move to efficient, cost-effective production of chip scale packaged devices a reality. By marking individual die while in wafer form, the system eliminates the handling, inaccuracy, and cost of tray-based marking, increasing throughput and mark quality. The *CSP200* processes 200, 150, 125, or 100mm diameter wafers over a variety of wafer surface types.

When the Challenge is Small Die

To obtain the precision needed for marking very small die with high accuracy, the *CSP200* employs

a unique patented architecture that indexes a section of the wafer over the mark and inspection field, similar to modern day lithography scanners. By using a high precision linear motor driven X/Y stage, coupled with highly accurate scan optics, and powerful programmable software, the *CSP200* produces high quality, accurate marks on die as small as 0.5mm.

The Automation and Flexibility You Expect

Automatic wafer ID reading, wafer map download-ing, and an advanced GUI system for job creation and system control: these are but a few of the *CSP200*'s features that provide the automation and flexibility required for wafer level marking. The *CSP200* also provides job portability, ensuring that die marking

for a single product type can be run across multiple *CSP200* systems without extra programming.

The Quality Control You Require

Equipped with *MarkTrace™*, a topside and back-side high resolution imaging system, the *CSP200* automatically inspects marks for conformance to your programmed mark requirements. The topside camera provides a "watermark" overlay that displays mark information in the correct orientation. This provides a final check to the operator before marking. The system also uses a laser power sensor at the wafer site to confirm programmed laser power, ensuring that the system consistently produces marks of uniform high quality.

Specifications

System:

- Number of cassette loading stations: 2 standard, 3rd optional
- Wafer sizes: 200mm standard; 100mm, 125mm, & 150mm optional
- Wafers thickness: 300µm to 800µm
- Flat & notch compatibility

Wafer ID Reader:

- All industry standard marks, OCR, barcode, 2-D cell code

Mark Positioning:

- X-Y and Theta alignment, +/-100µm 3 Sigma
- Type: proprietary scan head in conjunction with X,Y wafer stage
- Standard vector writing speed: 300mm/sec
- Nominal throughput, SEMI fonts: 270 chars/sec for 0.3mm high characters

Optical/Laser Performance:

- Minimum character size: 0.3mm
- Minimum feature size: 0.1mm
- Line width: 40 +/- 4µm
- Shallow mark depth (black mark): < 1µm
- Deep mark depth (white mark): < 5µm

Laser:

- Diode-pumped, Q-switched, frequency doubled Vanadate (Nd:YVO4) solid-state laser

System Controller:

- Pentium 2GHz or higher, 20" LCD flat panel monitor, Windows 2000

Software:

- Lightwriter® Graphical Mark Editor
- CSP200 Graphical User Interface and Control System

Standards Compliance:

- CDRH Class 1, S2-0303, S8-0701, CE directives, IEC 950, IEC 825, EN 60825-1, EN 60204-1, EN 418, EN 292-1, EN 55011-B, EN 50082-2, IEC 801

Facility Requirements:

- 220V +/- 10%, 50/60 Hz single phase, 25 Amps
- Exhaust: 3 in. Water [7 kPa] at 3 in. (76mm) o.d. port
- Clean Dry Air: 90-120 psig @ < 0.5 cfm
- Class 10,000 clean room compatible

Environmental:

- Operating temperature: 21°C to 24°C (70°F to 75°F)
- Non-operating temperature: -20°C to 50°C (-4°F to 120°F)
- Operating humidity: 8 to 75% noncondensing
- Non-operating humidity: 8 to 95% noncondensing

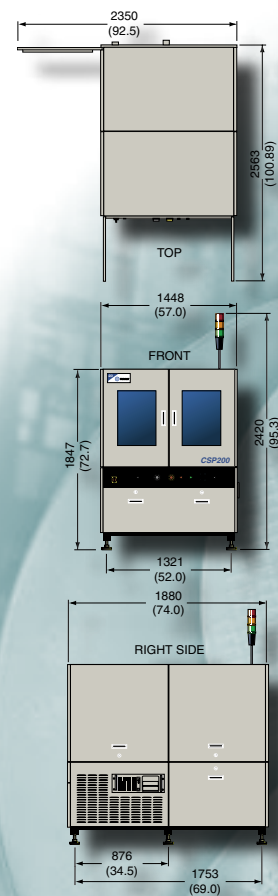
Physical Dimensions:

- Main Unit (LxWxH, excluding light tree): 1800mm x 1448mm x 1847mm (74.0" x 57.0" x 72.7")
- Workstation (LxWxH): 600mm x 900mm x 762mm (23.6" x 35.4" x 30.0")

Weight:

- 1175 kg (2600 lbs)

Dimensions in mm (inches)



Specifications are subject to change. Please consult Product Center for complete details. The classification of the WaferMark CSP200 is Class 1/I.

www.gsig.com/systems



Product Center
60 Fordham Road
Wilmington, MA 01887
USA
TEL: +1 (978) 661-4300
FAX: +1 (978) 988-8798

For sales information, visit our web site or contact your local sales office.